

Division of Applied Science & Management
School of Business and Leadership
Semester 2018-02, Winter 2019



Course Outline

Business 111

Introduction to Probability & Statistics (Statistics I)

3.0 Credits

Prepared by: Lisa Canary, Instructor

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Approved by: Margaret Dumkee, Dean

Date: December 18, 2108



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Introduction to Probability & Statistics (Statistics I)

Instructor:	Lisa Canary, PhD		
Office Location:	Room #A 2433 - Ayamdigut Campus		
Office Hours:	Thursdays 9:00 – 12:00 (By Appointment)		
Contact Information:	lcanary@yukoncollege.yk.ca		
Course Length:	43.5 hours (1.5 hrs/day; 2 days/week; 15 weeks)		
Course Days:	Monday/Thursday	Course Times:	10:30 – 12:00, 14:30 – 16:00
Class Room #:	A 2206	Lab Room #:	A2402

COURSE DESCRIPTION

This course will deal with the fundamentals of probability and statistics and will emphasize the application of statistical models to “real world” problems of uncertainty and variability. The instructor will concentrate on building a sound knowledge of the use - and potential misuse - of statistical methods to provide students with a base for future administrative problem solving and analysis. A certain amount of mathematical development will be involved, but we will look mainly at how the basic concepts are applied, rather than spending time on theorems and mathematical derivations. This course will begin with a review of data summarization and continue with a review of the basic laws of probability and the application of these laws to elementary statistical inference.

COURSE PREREQUISITES

None - students are assumed to come into the course with the basic program admission requirements (i.e. Grade XI mathematics and Grade XII English). The first assignment in this course requires the use of a spread sheet program (such as Microsoft Excel).

EQUIVALENCIES /TRANSFERABILITY:

For more information about transferability, please refer to the BCCAT Transfer Guide (<http://www.bctransferguide.ca/search/course>), or contact the Schools of Applied Science and Management (668-8762) or Liberal Arts (668-8770).

LEARNING OUTCOMES

- 1) To introduce students to the quantitative aspects of decision-making.
- 2) To familiarize students with the statistical techniques applicable to business problem-solving.
- 3) To provide students with a set of basic skills, with which they can begin conceptualizing problems in a quantitative manner.

COURSE FORMAT

The course will be delivered using a combined format of lectures, cases and discussions. You will be asked to apply statistical theory and concepts covered in class to cases, discussions and assignments.

COURSE REQUIREMENTS:

Attendance (5%)

Regular student attendance and participation are essential. The material covered in the classroom will be cumulative in nature and missing classes will tend to put a student "out of sync" in ways that won't be entirely evident until an assignment or examination comes due.

A portion of the final grade (5%) is based on attendance in class. Parts of the midterm and final exams will be based directly on class lectures and discussions. If students miss a class, it is their responsibility to find out what they missed.

Hand-in Assignments (25%)

Hand in assignments are meant to keep you up-to-date with the assignment questions. The questions on the assignments will be similar to the assignment questions for that particular section of the course. Students who complete the assigned questions prior to the date of the test should have no problem scoring well on these assignments.

Students given one week to complete assignment. One extra week will be given for late assignments with a (10%) deduction, after which time, assignments will not be accepted. Unless prior arrangements are made with the instructor, or the instructor indicates otherwise, all assignments will be word-processed, saved as pdfs then uploaded to Moodle.

Midterm (30%)

There will be one, one-and-a-half-hour term test in this course. The term test will be held during regular class sessions, as indicated in the accompanying syllabus.

Final Examination (40%)

There will be a three-hour final examination. The exam will contain a short answer section and an essay and/or numerical problem section. Details on this examination will be provided near the end of the term.

Attendance and Participation	5%
Assignments (7)	25%
Midterm	30%
Final Examination	40%
Total	100%

REQUIRED TEXTBOOK

Keller, G. (2017): *Statistics for Management and Economics Eleventh Edition*: Cengage Learning, 458 pp.

Earlier editions of the microeconomics text should be fine for this course, but the instructor will be using the page references in the eleventh edition for any content references.

An electronic version of the textbook can be downloaded for approximately \$85 from the following internet address:

<https://www.vitalsource.com/products/statistics-for-management-and-economics-xlstat-gerald-keller-v9781337516723>

Single copies of the tenth edition of the statistics text have been placed on two-hour reserve in the Yukon College library.

Supplementary Material

A course web page is set up in Moodle. The course web page will serve mainly as a repository for the course materials handed out in class (and any data files you'll need to complete the assignments). Content will be added to the web page as course progresses.

Required Supplies

Students will have access to Microsoft Excel from their personal Office 365 account or computers in Yukon College labs.

ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

PLAGIARISM

Plagiarism is a serious academic offence. Plagiarism occurs when students present the words of someone else as their own. Plagiarism can be the deliberate use of a whole piece of another person's writing, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material. Whenever the words, research or ideas of others are directly quoted or paraphrased, they must be documented according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Resubmitting a paper which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the College.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon College recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from any Yukon College program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukoncollege.yk.ca/yfnccr.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon College Academic Regulations (available on the Yukon College website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

SYLLABUS

Week	Date	Ch.	Topic
1	January 7	1 & 2	Intro to Statistics and Graphical Descriptive Techniques I & Introduction to Excel
2	January 14	3	Graphical Descriptive Techniques II (Assignment #1 - Ch.1, 2 & 3)
3	January 21	4	Numerical Descriptive Techniques
4	January 28	5	Data Collection and Sampling (Assignment #2 - Ch.4 & 5)
5	February 04	6	Probability
6	February 11	7	Random Variables & Discrete Probability Distributions (Assignment #3 - Ch. 6 & 7)
7	February 18		READING BREAK
8	February 25		MIDTERM REVIEW AND MIDTERM (Chapters 1 - 7)
9	March 4	8	Continuous Probability Distributions
	March 8		Last Day to Withdraw from Winter Semester Courses without Academic Penalty
10	March 11	9	Sampling Distributions (Assignment #4 - Ch.8 & 9)
11	March 18	10	Introduction to Estimation
12	March 25	11	Introduction to Hypothesis Testing (Assignment #5 - Ch.10 & 11)
13	April 1	12	Inference About a Population
14	April 8	13	Inference About Comparing Two Populations I (Assignment #6 - Ch.12 & 13)
	TBA		Final Examination (Exam period: April 15 - 26)